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UNITED STATES PATENT APPLICATION

OF

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FOR

PERFORMANCE MANAGEMENT SYSTEM

SUBSTITUTE SPECIFICATION

- ☐ With Markings
☒ Clean, without Markings

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PERFORMANCE MANAGEMENT SYSTEM

FIELD OF THE DISCLOSURE

[0001] The disclosure relates to a performance management system for use in a processing environment in which the people resources account for a large proportion of the operational cost and therefore, associated costs and revenues are dependent on the successful management of the performance of this resource in terms of productivity, quality and behavior.

DISCUSSION OF BACKGROUND INFORMATION

[0002] Heretofore, much work has been carried out on development of contact center functionality such as switches/ACDs, fax gateway, e-mail, web, Customer Relationship Management, quality and workforce management systems. For example, United States Patent No. US5206903 (AT & T) describes automatic call distribution equipment which routes calls according to agent skills. European Patent Specification No. 0740450A2 (IBM) also describes such a system. PCT Patent Specification No. WO99/60766 (Callscan) describes a system to optimize human resource allocation in a call center environment. The system includes a knowledge base, a call activity monitor, and a performance reference model.

[0003] These developments focus on :

[0004] Contact Management. ACD's, Fax Gateways, IVR, E-Mail, Web – to manage and either automatically handle or route customer contacts according to configurable routing criteria.

[0005] Workforce Management. Workforce Management Systems – used primarily to forecast anticipated workloads and the scheduling of the corresponding resources required to achieve self-imposed service level goals.

[0006] Quality Assessment. Quality Systems – focused on the monitoring and evaluation of the quality of customer contacts.

[0007] Customer Relationship Management. “CRM” Systems – focused on consolidating the different customer process systems into a single front-end and providing the employee with a contact history so that the customer queries can be handled better and resolved more efficiently.

[0008] Whilst all of these systems have disparate primary functions, they all create detailed and important management information which form part of the overall picture of performance in any organization.

[0009] An object of the disclosure is to provide an organization with a single source for performance measurement information and a configuration tool to allow an organization to manipulate and exploit this data to provide all the users with a consolidated view of their own performance or that of their teams, departments, sites or business units.

[00010] This is referred to in this specification as “information management”.

[00011] A second objective is to provide the end-users (mainly agents, team leaders and managers) with a process for managing performance, the process comprising the following.

[00012] Performance Review – to facilitate individual review of one’s own performance.

[00013] Appraisal management – to provide more consistency and objectivity around the review/appraisal process.

[00014] Personal Development Plan – to ensure that all training and development efforts are more closely linked to the business objectives.

[00015] Reward Manager - calculation of reward points and the administration of a gift process to promote improved fairness and staff motivation.

[00016] The combination of these is referred to in this specification as "performance management".

SUMMARY OF THE DISCLOSURE

[00017] According to an embodiment of the disclosure a performance management system is provided.

[00018] The system includes configuration functions comprising:

a call center configuration function for configuring call center parameters in a configuration dataset, and

a data dictionary function for formulating under user instruction, calculation rules, value inputs for rules and storage parameters for database fields.

[00019] A plurality of information management functions are provided, each comprising means for capturing raw data from an external customer services system, for processing said data, and for storing the processed data according to the data dictionary configuration.

[00020] A database is provided for storing processed data, and a user interface is provided comprising means for integrating with a configuration and information management functions.

[00021] In one embodiment, the configuration functions comprise an objective wizard function for configuring objectives for employee and team performance.

[00022] In one embodiment, the objective wizard function comprises means for prompting input of objective description, appraisal definitions, and a rating calculation.

[00023] In one embodiment, the configuration function comprise an objective group configuration function comprising means for defining under user instruction an objective group of objectives having the same appraisal definitions and weightings associated with objectives.

[00024] In another embodiment, the configuration functions comprises a KPI wizard function comprising means for prompting user input of organization-level ratings and thresholds.

[00025] In a further embodiment, the configuration functions comprise a KPI group review configuration function comprising means for grouping KPIs together for reporting purposes, and the information management functions comprise a KPI group review function comprising means for outputting group review data.

[00026] In a further embodiment, the information management functions comprise a personal performance review function comprising means for allowing controlled agent access to personal performance data generated according to configured agent objectives.

[00027] Preferably, the personal performance review function comprises means for allowing an agent to input comments associated with his or her personal performance data.

[00028] In one embodiment, the personal performance review function comprises means for allowing a team leader to plan and record agent development against objectives, and for allowing an agent to access his or her personal development data.

[00029] In one embodiment, the system further comprises functions for configuring and processing rewards in recognition of agent performance against objectives.

[00030] In another embodiment, the user interface, the configuration functions, and the information management functions together have a structure of classes for instantiating objects in a visual layer, a business logic layer, and a data services layer.

[00031] In one embodiment, the business logic class instantiates business logic objects having code of a configuration or an information function, and means for terminating the object at the end of a user session.

[00032] In one embodiment, the business logic layer executes on a business server.

[00033] In a further embodiment, wherein the data services layer comprises a class for instantiating data services objects residing on a database server and means for terminating said objects after a user session.

[00034] In one embodiment, the system comprises a transaction server for executing data services layer functions.

[00035] In another embodiment, the transaction server comprises means for maintaining a pool of data services objects together and for maintaining a pool of database connections.

[00036] In one embodiment, dynamic library links for the objects are registered using proxy stub pairs on both a client and a server.

BRIEF DESCRIPTION OF THE DRAWINGS

[00037] The disclosure will be more clearly understood from the following description of some embodiments thereof, given by way of example only with reference to the accompanying drawings in which:

[00038] Fig. 1(a) is an overview block diagram of a performance management system of the invention;

[00039] Fig. 1(b) is a diagram illustrating the physical architecture of the performance management system;

[00040] Fig. 2(a) is a block diagram illustrating the main functions of the performance management system; and

[00041] Figs. 3 to 7 are sample screen shots illustrating aspects of the performance management system.

DESCRIPTION OF THE EMBODIMENTS

[00042] The following description pertains to one or more specific example embodiments. Thus, described features may be for the described embodiment and need not be for other embodiments not expressly described herein.

[00043] Referring to Fig. 1(a), there is shown a performance management system 1 for the management of performance in a customer services environment and reporting on same. The system 1 interfaces with external performance measurement systems 2 comprising a switch 3, a work force manager 4, and third party systems 5 that store performance measurement data within a structured database and can produce reports on either employee, application, departmental or organizational performance. The external systems 2 interface with these systems (API's and integration engine), as they allow raw data to be formatted and imported into the performance management system.

[00044] The system 1 comprises information management functions 6 which use data from a KPI (key performance indicator) table 10 and a results & ratings table 11 within a database 9 to perform calculations pertaining to individual performance of employees, in addition to the overall performance within the customer services center. The information management functions 6 interact with an HTML user interface 7 to display to

the end-user the results of the calculations performed on performance. The database 9 also contains configuration data tables 12. The contents of these tables allow the system 1 to be tailored to suit individual organizations, thus minimizing the need for bespoke development of the system to suit particular business operations. The configuration data is captured through the use of configuration functions 8 and a Windows™-based interface 13, which provides the user with a GUI to specify the unique characteristics of the organization.

[00045] At a high level, the database 9 captures raw data from the external systems 2 in a structured manner using APIs, however, flat-file reports may alternatively be used. The raw data is processed by an integration engine 18 according to requirements configured in the integration engine. The performance data is provided in real time via the HTML user interface 7 in response to appropriate requests/enquiries. The performance data may relate to individual customer service agents, to teams, or to overall departments and even site locations. Performance is measured against objectives set up during configuration, and also against key performance indicators (KPIs). Like objectives, KPIs have targets but are not rated. However they do not relate to persons, but instead to an organization or department as a whole.

[00046] The architecture of the system 1 is shown in Fig. 1(b). It has a three-tier architecture, which includes a user interface layer 15 supporting the functions 7 and 13, a business services layer 16 supporting the functions 6 and 8, and a data services layer 17 supporting the database 9. The functions are instantiated as objects from user interface, business logic, and a data services classes. Objects are instantiated for a task such as a user enquiry session and are terminated at the end.

[00047] User Interface Layer 15. There are two types of user interface.

[00048] The Browser Interface 7. 1. This includes a set of Web classes that reside on a Web server. 2. They send HTML to a client browser. 3. The primary role of the browser is to view the data in a variety of ways i.e. graphically, tabular, by day, by month,

by year. 4. The browser front-end allows the measurement and management of performance. The measurement is by viewing the data in a variety of forms, and the management is by allowing the user to specify (according to his security privileges) targets, development plans, comments and even override results.

[00049] The Windows Interface 13. 1. This includes a set of forms which reside in the user interface layer 15. 2. It sends the configuration data directly to the business services layer. 3. The primary role of the Windows™ interface is to configure the browser and to determine the behavior of the data within the system 1. 4. The Windows interface allows 'tailoring' of the system to meet the specific requirements and characteristics of the contact management center, thus omitting the need for expensive customization of the product.

[00050] Business Services Layer 16. The business services layer 16 has the following attributes: 1. It performs all calculations and all validations. 2. It resides on a business server.

[00051] Data Services Layer 17. The data services layer 17 has the following attributes: 1. It accesses the database 8 for the required data. 2. It resides on a data server.

[00052] A server process called "Overnights" is executed by the system every day. It has two main functions: 1. It imports data from the external system 2 (KPI data can be imported every half hour whilst all other data is imported once a day). 2. It performs the performance management calculations (results & ratings calculations/recalculation).

[00053] The product is distributed over multiple servers. A Web server hosts the browser interface 7. This holds all of the ASP and Web Classes.

[00054] A business server hosts all of the business objects of the business layer 17. All data processing occurs on this server and therefore this uses the most resources. The WindowsTM GUI 13 directly accesses the business server 16, whilst the browser UI 7 accesses the business server through the Web server. A data server hosts data services objects in addition to the actual database 9. The business server calls the data services object, which then in turn retrieve data from the database 9.

[00055] Transaction Server (MTS). The system 1 utilizes a transaction server in the following way: 1. It handles all of the database transactions between the objects in the business layer and the objects in the data services layer. 2. It holds a pool of objects together. 3. It maintains a pool of database connections. 4. It allows improved scalability and performance.

Dynamic Library Links (DLLs) are registered using proxy stub pairs on both the servers and the client. When a function 6 requires the DLL, the proxy stub pairs direct the function to the DLL stored on the server. The proxy stub pairs therefore enable the objects to communicate with each other across multiple servers.

[00056] Referring now to Fig. 2, the configuration functions 8 include:

- 20 Call Center Configuration
- 21 Hierarchy Maintenance
- 22 Data dictionary maintenance
- 23 Employee Maintenance Utility
- 24 Appraisal rating Group Configuration
- 25 Performance Exception Codes

[00057] The information management functions 6 include:-

- 30 Personal Development Status Configuration

31	Personal Development Action Configuration
32	Skill Configuration
33	Personal Development Plan
40	Reward Configuration Utility
41	Reward Statement & Ordering
42	Reward Manager Utility
43	Reward Points Editor
50	Objective Wizard
51	Objective Group Configuration
60	Manual Results Entry
61	Performance Review
62	Manual Ratings Entry
70	Appraisal Manager Configuration
71	Appraisal Manager
80	Report Manager Configuration
81	Report Manager

[00058] The call center configuration function 20 is used via the Windows™ interface to construct the conceptual organizational hierarchy. The organization can configure up to ten hierarchical levels. Fig. 3(a) shows an example for an organization that has seven levels from agent through to the global organization view. The screen of Fig. 3(b) then allows the user to determine functional access (at the browser end) to the various performance management functions for each level as specified in the system hierarchy in Fig. 3(a). This is inputted in a simple Yes/No cellular structure. Because the defined organizational hierarchy forms a basis for the operation of many other functions,

amendments to the same can only be made by a senior systems administrator with the appropriate access and user rights.

[00059] The function 20 is coded in Visual Basic™ and refers to the characteristics of the customer services center. After the call center configuration has been defined, a hierarchy configuration is then set up for each site using the function 21. The fields completed for site configuration are call center name, call center ID, year and week start values, system days, close off data, currency mask and a moratorium value.

[00060] The data dictionary maintenance function 22 allows users to manipulate the measurement data that has been imported from the third party performance measurement systems. The primary purpose is to formulate the performance management system objective fields from all the data fields imported from the external third party databases or performance measurement systems. A sample screen is shown in Fig. 4(a), in which the user is creating a new data dictionary field that forms the measurement of schedule adherence (the percentage of time an agent actually spends signed-on to their phone against the time they were scheduled to be there). As illustrated, the user inputs a name description, associates the data dictionary field to a level in the hierarchy, and specifies the period against which the measurement data is captured. The level must be chosen from the set established when creating the organization hierarchy. A second screen, shown in Fig. 4(b), is used to assign the data dictionary name to a database field or a combination of database fields and defining how these fields are to be calculated. The calculation is defined by a Value 1/Operator/Value 2 sequence. In the example Fig. 4(b), the user selects the field [fgn_value5] which relates to the actual time the agent was signed-in (taken from the ACD) and divides this by [fgn_value21] which relates to the amount of time they had been scheduled to be signed-in (taken from the Workforce Management System).

[00061] The following table sets out the field descriptions in more detail.

Field Name	Mandatory / Optional	Field Behavior	Field Description
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Field	-	<i>Displayed</i>	This column displays the database fields that may be entered.
Description	-	<i>Displayed</i>	This column displays the description associated with the field. This cannot be edited by the user within the DDM 22 as it is display only. It is stored within the DDM.
Value1	<i>M</i>	<i>Input</i>	<p>This fields allows the user to enter the summation formula for the summary periods. A result will be produced for all periods regardless of whether the period was chosen as a rating period in the objective wizard function.</p> <p><u>Supported</u></p> <p>All approved ANSI 92 SQL Statements.</p> <p>The result of this part of the formula will be stored in the database and used to sum results for period and teams.</p>
Operator	<i>O</i> <i>Mandatory if Value2 is entered</i>	<i>Selection</i>	<p>This operator makes up the complete formula using Value1 and Value2. Initially the data from the foreign data table is calculated using the full formula. To calculate the sum for periods and teams, the formula Value1 Operator Value2 will be used.</p> <p><u>Available operators</u></p> <p>+, -, /, *</p>
Value2	<i>O</i>	<i>Input</i>	<p>This fields allows the user enter the second part of the Summation Formula. This field may not be required for similar formulae of a field assignment.</p> <p><u>Supported</u></p> <p>All approved ANSI 92 SQL Statements</p> <p>The result of this part of the formula will be stored in the database and used to sum results for period and teams</p>
Result	-	<i>Display</i>	Displays the result of an expression based on skeleton data, when the 'TEST' option is selected.

[00062] The following table sets out the command options.

Command Name	Description
TEST	This allows the user to test the full formula entered. A result of the Formula is displayed from skeleton test data in the database.

Command Name	Description
OK	Saves any changes / additions made by the user without prompting for confirmation of same; and quits component / application.
CANCEL	If change / additions made, prompts user to save same; otherwise quits component / application.
HELP	Opens Help file for component.

[00063] Fig. 4(c) shows the input screen used to define the data dictionary rules. These rules define how the result for the field is entered, displayed, and calculated. As illustrated in Fig. 4(c) the minimum and maximum values are set, as is the display mask. In this case, ##% means that the result will be displayed as a % and rounded up with no decimal places. The over-ride check box allows the organization to control whether or not these results can be over-ridden by a user's manager. The following table describes the inputs in more detail.

Field Name	Mandatory / Optional	Field Behavior	Field Description
Min Value	<i>O</i>	<i>Input.</i>	This field is used to restrict the input permitted for a manual data entry or a result override. The value entered must be greater than or equal to this value.
Max Value	<i>O</i>	<i>Input.</i>	This field is used to restrict the input permitted for a manual data entry or a result override. The value entered must be less than or equal to this value.
Display Mask	<i>O</i>	<i>Input</i>	Determines how the result for the data dictionary field will be displayed. Used to indicate currency, percentage, minutes or seconds.
KPI	<i>O</i>	<i>Check</i>	Indicates that this data dictionary field will be used in conjunction with KPI's and not objectives.
Manual	<i>O</i>	<i>Check</i>	Indicates that this data dictionary field will require a manager to enter a result manually and that data will not be populated automatically from the switch.

Field Name	Mandatory / Optional	Field Behavior	Field Description
Override	<i>O</i>	<i>Check</i>	Indicates that results for this data dictionary field cannot be over-ridden in the team performance review screen. This field will be used where the formula for the data dictionary is deemed too complicated to allow values to be changed.

[00064] The following are the command options.

Command Name	Description
OK	Saves any changes / additions made by the user without prompting for confirmation of same; and quits component / application.
CANCEL	If change / additions made, prompts user to save same; otherwise quits component / application.
HELP	Opens Help file for component, if in WinHelp then the topic is generally (but not always) specific to the tab / component the user is currently using.

[00065] The following are the business rules.

Description	If the data dictionary created is to be used to provide data for the key performance indicators (KPI's), then it must be entered above the highest level specified.
Reason	Entering the data dictionary that is to be used in conjunction with a KPI at the highest level.
Typical Scenario	A data dictionary is to be created for Average Handling Time. This will also be later used as a Key Performance Indicator. The level for the AHT is the level higher than the highest level specified in Hierarchy Maintenance, i.e.: if the highest level in Hierarchy Maintenance was 'Organization' at Level 7, then the Data Dictionary for AHT is specified at Level 8.

[00066] The following are the best practices.

Description	The display mask must be configured to reflect the maximum characters as specified in the 'Max Value' field, i.e. if the maximum value is 4 characters (1000) then the display mask must provide provision for 4 characters (####0).
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Reason	The input mask must provide provision for all the characters entered into the data dictionary field.
Typical Scenario	A manual entry data dictionary is set-up called 'revenue', which will have a maximum amount of £1,000,000. The call center wish this to be displayed with commas separating every 3 characters, a '£' sign and to 2 decimal places, therefore the input mask is specified as '£#,###,##0.00'.

[00067] The employee maintenance utility 23 creates an employee (agent). The inputs include name, password, password confirm, organization hierarchy level, a manager to whom the employee reports, an ID, an objective group of which the employee is a member, a team name, a flag indicating whether KPI data will be attributed to the employee, addresses, system ID, and any additional information. The following business rules are applied to employee creation, objective creation, and objective modification.

[00068] Employee Creation

Description	Before assigning an employee, a manager, team name or objective group, the employee must be assigned a level.
Reason	The level determines the possible managers, teams and objectives that the employee could be assigned.
Typical Scenario	An employee is assigned to manager 'X', belongs to team 'Y' and has objective group 'Z'. Before any of these are specified the employee must be assigned a level such as 'Agent'.

[00069] Objective Creation

Description	All employees that share the same manager must be of the same level and the same appraisal group.
Reason	The system 1 only allows provision for a manager to manage employees of a single level. Employees must share the same appraisal group as the performance review assumes only one appraisal group throughout the team.
Typical Scenario	As employees are entered onto the system 1 and assigned managers, only those at the same level and who share the same appraisal group will be allowed to be entered into the same team.

[00070] Objective Modification

Description	An employee's objective group can be amended after it has been specified. In the event of an employee's objective group is amended more than once in a single day, all intermediate objective groups will be deleted and all results and ratings will be attributed to the final objective group.
Reason	Each objective is specified to an employee. When a new objective is assigned, the current date is attributed to the start date of the new objective. The previous objectives end date is set as the previous days date.
Typical Scenario	The firm intends to move an employee from objective group 'A' to objective group 'B', however it accidentally moves the employee to objective group 'C'. The mistake is later rectified on the same working day, and any results and ratings that were collected and attributed for objective group 'C' will be reallocated to objective group 'B'.

[00071] The appraisal rating group configuration function 24 allows the user to define appraisal rating groups. Each group can have up to ten appraisal ratings, which will be used to rate individual employee's objectives.

[00072] The review periods available for the system are also defined within this utility. These review periods dictate the 'period selection tabs' displayed in functions such as personal performance review and appraisal manager, and dictate the periods (apart from daily and weekly) when ratings can occur as set out in the objective wizard function.

[00073] The user creates the appraisal rating groups and these will be used throughout the system. These appraisal ratings form an integral part of the system. Separate appraisal rating groups may be set up where a different function in the organization might wish to rate individuals in a different fashion.

[00074] The input screen defines an appraisal rating group and the appraisal review periods that apply to it. This screen allows the user to configure appraisal rating groups which are used in conjunction with objective wizard, objective group configuration - objective group rating, appraisal manager, personal performance review. The user configures appraisal rating groups, which appear on all the above screens. There is a maximum of ten Appraisal Ratings per group and more than one appraisal rating group can

be created. The users must ensure that they select all the review periods required for all objectives i.e.: they might only have a requirement to review sickness and absence at the 6-month juncture. However, they must select 6 month and it will apply to all. The review period is by appraisal group and not by objective.

[00075] The performance exception codes configuration function 25 allows the user to configure standard codes which can be used by an individual's manager to over-ride their performance for given reasons like system issues, health, etc. This functionality ensures that the system 1 allows discretionary management decisions within the organization but has a means of tracking and reporting on these.

[00076] The basic principle behind this is that the agents (and team leaders) take responsibility for their own performance and enter comments against their performance (good or bad) in personal performance review. The manager then has the ability to exclude/override the result for that day from their overall result and from any averages. They must however enter a code for the exception; this will be reported to management and will highlight the various reasons for excluding bad results. This screen is the configuration screen to set up the standard reason codes and is mainly used during the initial system installation. Ongoing changes or additions may be needed as the conditions change.

[00077] An objective wizard function 50 defines an objective. An objective is a performance expectation assigned to an individual and is set up using the objective wizard 50. The wizard function 50 prompts input of the following values.

Field Name	Mand. / Opt.	Field Behavior	Field Description
Objective Name	<i>M</i>	<i>Input</i>	Name of new objective e.g. average handling time.
Description	<i>M</i>	<i>Input</i>	Free-format textual narrative explains the overall purpose of the objective.
Appraisal Rating Group	<i>M</i>	<i>Input – Pre-defined List</i>	This field allows a user to assign an appraisal rating group to an objective, thereby allowing the user to review and

			appraise many objectives together.
Objective Class	<i>O</i>	<i>Input – Pre-defined List</i>	This field allows the user to associate an objective class with an objective. It allows the user to class/sort objectives for reporting purposes only.

[00078] A next step prompts input of data indicating the source of data for the objective. The following are the inputs.

Field Name	Field Behavior	Field Description
Rating – Calculated	<i>Option</i>	The rating will be calculated by an overnight process based on results and rating methods.
Rating – Manual	<i>Option</i>	<p>The rating be will manually entered by a team leader or manager for each target period (as specified on the next screen). This rating will be added together for periods greater than the target period.</p> <p>When this entry is selected, no data dictionary field needs to be selected as we are giving a rating for the objective and no data or results are required to compute the rating. The data dictionary and result type section will be disabled. The rating will always by applied to individuals.</p> <p>The additional rating periods category in a next screen will be disabled. The target period will define the period for which manual rating is entered.</p> <p>After the target period is selected in the following screen, the final screen, “Finished”, will be presented in the objective wizard function.</p>
DDField – Standard	<i>Option</i>	The measurement data is automatically captured – from the ACD Switch for example. The drop down will list only non-KPI, non-manual data dictionary items.
Manual Result Entry	<i>Option</i>	The user will have to key in the result, which will be used in the objective. The drop-down will list only non-KPI, manual data dictionary items.

Field Name	Field Behavior	Field Description
DD Field – Drop Down	<i>Selection</i>	Lists All data dictionary fields that are not set up for KPI and are manual only if the Manual Option is selected. The data dictionary field defines the Measurement Period for the objective. One cannot select a target or rating period lower than this measurement period.
Result based upon Individual	<i>Option</i>	The objective will use an individual result when calculating the rating. Objectives of this type may only be assigned to employees at the same level as the data dictionary field associated with the objective, or a higher level.
Result based upon Reportee Team	<i>Option</i>	This is, in effect, the same as Individual results. Individual and reportee team are treated the same by the system. Starting at the level associated with the data dictionary field, results are always summed up into teams. The team result for Level 1 becomes the individual result for Level 2 and so on. This field makes it clearer to the user what type of objective is being set up.
Result based upon Peer Team	<i>Option</i>	The objective will use the team result when calculating the rating. Objectives of this type may only be assigned to employees at the same level as the data dictionary field associated with the objective or, employees at a level higher than the data dictionary level. The objective is always, in-effect a peer objective, i.e. the employee will be rated on the result of the team that he is part of. The result and rating that he will see will be stored on the database with his manager. When these objectives are assigned to team members, pseudo objectives are assigned to the team leader. No calculation of ratings is performed for the team members, but rather they see the result and rating for the team that is assigned with the team leader. If team peer result is selected, the objective will only be rating using absolute values; i.e. the rating method screen will not be shown and absolute only will be assumed.

[00079] The wizard 50 then proceeds to prompt input of rating periods, rating methods, absolute thresholds, and improvement thresholds. For example, the rating

method maybe based on either an absolute result or a percentage improvement on the initial target set.

[00080] The objective group configuration function 51 allows users to create and administer objective groups for the purposes of easy handling of objectives. The only constraint for groups is that the objectives have the same appraisal definitions. The objective group is defined by:

- name,
- selected appraisal rating group,
- description, and
- objectives within the group.

[00081] The function 51 also allows a percentage weighting to be applied to each objective within the group. Also, random sample ratings may be applied to each objective.

[00082] The KPI configuration functions 52, 53, and 54 allow users to define all the key performance indicators associated with the call center or a subset of the call center such as customer services. The KPIs are similar to objectives except that they are not assigned to individuals and are not rated. They are merely used to report status. Typical KPIs are Service Level, Abandon Rate, Number of Calls, Total Revenue etc. If the system 2 has been configured to have more than one Skill Group, e.g., Customer Services and Telesales, then there is a group of KPIs for each of these, i.e.: Customer Service Level, Telesales Service Level. The KPI data can often be more frequent than employee objective data, which has a minimum measurement period of one day. The system 2 typically produces service level and other information associated with skill groups (also called applications or queues) every half-hour. This means that the system receives half-hourly KPI data from the customer services system 2.

[00083] The KPI's are not rated but they have a target for reference purposes. For example, a call center might state that the abandon rate target is 5% or less. This can then

be shown on a graph or report alongside the actual data to show how the call center is performing.

[00084] The KPI wizard 52 prompts definition of:

- KPI name and description,
- a static target for each month,
- additional targets, and
- rules.

[00085] In a typical scenario, a manager wishes to see the Abandon rate for the call center on an intra daily basis. A KPI will be set up to capture this data, and the results will be reviewed via the KPI group review utility. These results are presented in tabular or graphical format. For an effective call center the manager requires that the Abandon rate is no more than 5%. Therefore, he would enter 5% in the target. As the manager would like to view this on an intra-day basis, the intra-day, daily and weekly check boxes would need to be ticked.

[00086] Regarding targets, in a typical scenario a manager wishes to see the days taken absent due to sickness for the call center on a yearly basis. A KPI will be set up to capture this data, and the results will be reviewed via the KPI Group Review utility. These results are presented in tabular or graphical format. If the manager wishes to specify the target for the number of days taken absent due to sickness as 40 in a year, the manager would then need to specify in the yearly column the target of 40. If the manager wanted to view the achievement of the target on a quarterly or half yearly basis, then the values of 10 would be needed to be entered for each quarter and the value of 20 for each half year. This also allows the manager to weight the absences (i.e. allow more absences in the winter months than the summer months).

[00087] Regarding the rules, in a typical scenario a manager wishes to specify the target for the abandon rate as no more than 5%;, therefore, the manager would need to set-up a KPI for abandon rate and specify the target as 5%. The manager would then need to

check the “<=” box, thus informing the system 1 that any value below the 5% target would be considered as meeting the target. The manager would then need to specify how the next year’s targets for the KPI would be calculated.

[00088] The KPI group review configuration function 53 allows a user to group a number of KPIs together for reporting purposes. The KPI group review function 54 allows viewing of KPI data as set up by the wizard 52. The functions 52, 53, and 54 all operate with the KPI table 14, which is dedicated to KPI data only.

[00089] The performance appraisal manager configuration function 70 allows set up of an appraisal rating group, a review/appraisal process, and additional information which are then used by the Appraisal Manager 71 for review and appraisal purposes.

[00090] The performance appraisal manager is used as an on-line tool for individual performance appraisal and review. It is the view of the overall performance achievements of the individual, by performance review periods, for a particular year.

[00091] These performance review periods are set up via an appraisal rating group configuration utility and are presented as tabs on the appraisal manager function 71 in the browser.

[00092] The year can be changed at any time. The information contained within this function is directly fed into the appraisal summary report. Referring to Fig. 5 one of the screens of the function 71 is shown. This screen outlines the appraisal process and specifies the objective ratings for the individual selected.

[00093] A manual results entry function 60 allows manual input of results by agents or team leaders. The performance review function 61 allows the user to view performance data relating to their own personal objectives i.e.: those objectives within their assigned objective group. It shows the overall rating for the individual as well as the individual’s targets, results, and ratings for each objective. Targets and ratings are only displayed if the

review period selected, i.e., daily, weekly tab, is defined as a rating period for the objective. The user can review their performance against objectives on a daily and weekly basis as well as for the review periods as defined in the appraisal rating group configuration. A user can review historical data against the period selected, i.e., if they are looking at weekly data, then they can review historically by week, and, if daily, then by day, but only in keeping with the archiving rules for the data. If the daily tab is selected and today is 1/2/99, they cannot view their performance for 1/10/98 if daily data is archived after 30 days. This function will normally be used by agents, team leaders and managers (it is improbable that organizations may set objectives such as these for senior managers or directors) to review only their own personal objectives and to see how their individual performance compares to that of their team which is also displayed. This function also allows an individual agent to input a comment against their performance for a particular objective. An individual can only comment against a result for an objective's measurement period (defined by the data dictionary maintenance function 22), i.e.: if an objective is measured weekly and the agent wishes to comment on why a bad result was achieved then he/she may only do so on the weekly tab.

[00094] The personal development status configuration function 30 allows a user to edit an existing status available in a personal development plan 33. The plan 33 is dedicated to allowing a manager or team leader to plan and record agent development modules against specific objectives. Each user may view his or her own personal development and the history of associated actions. Referring to Fig. 6, the function 33 displays the skill that requires a development plan and the action that has been assigned to the skill with the status of the action. This allows reports to be executed for the relevant department (HR, accounts, team leaders, training etc.) giving them the status on the relevant skills for relevant actions, thus allowing them to make the necessary arrangements. The screen allows the user to monitor the progress of individuals and the effects of the actions on their objectives.

[00095] In a typical scenario, a team leader wishes to set an action for an agent who is having problems meeting his Average Handling Time targets. The team leader moves

into the relevant agent's screen by selecting his name from the name field in the main browser. The team leader then selects AHT from the objective drop-down menu. The team leader identifies the skill area requiring development as the 'Closing' skill, and selects this from the drop down combo, he then sees that so far the actions that have been given to the agent to aid his AHT have been a 'self-learning' program and a 'buddy session'. As these seem to have not been successful, the team leader decided to enter the agent onto a 'workshop'.

[00096] The training department then executes a report for the amount of AHT workshops that have been requested. Once they see that the number is sufficient, they request a workshop to be held.

[00097] The reward functions 40 to 43 enable the organization to automate a points and gifts reward process. Points can be assigned to ratings of individual objectives and using these an individual can then choose their own gift when they want it. These gifts are configurable by the organization. The reward configuration utility 40 allows a user to assign points to reward prizes. The reward statement and ordering function 41 allows each individual user to both view the points they have accumulated and to order from the different rewards on offer. It also provides a statement to the user (similar to a bank statement) showing how many points they have, how they received them and any transactions (purchases) which occurred. The principle behind this utility is the concept of reward and recognition. It does so by providing immediate reward for effort. These points/prizes systems have previously taken much administrative effort.

[00098] The reward functions handle this administration and offer call centers an easy-to-manage mechanism for introducing (and tailoring) their own reward system. The 30 reward system can be on a personal basis (where the individuals are awarded points individually) or this can be done for the team. A call center may introduce a competition in which the first team to gain 1500 points wins a trip to Paris for the weekend, with the aim of building teamwork and hence strengthening the team. The reward and recognition module will provide a means of monitoring the progress of each group.

[00099] Typically, agents and team leaders will receive reward points for exceeding individual objectives. The reward system manages and awards the points. The call center can configure the rewards (cash, tickets, wine etc.) and set the number of points for each reward. Users earn points; and can then buy the rewards when they have enough points. As shown in Fig. 7 (a), the function 41 provides the user with a detailed breakdown of amendments to points.

[000100] The points can be amended in three ways:

- 1) Points awarded/ deducted/ amended by the rating given to an objective, either automated or manual.
- 2) Points deducted/ added for the 'Purchase' or 'Refund' of items.
- 3) Points added/ deducted by the Reward Point Editor.

[000101] The purpose is to allow the agent to see what benefits their strengths have given them and what costs their weaknesses have brought, hence encouraging them to focus on their weaknesses and maintain their strengths. The screen also provides the agent with information pertaining to any transactions that they have made or are pending and provides them with the cost (in points) of the item they purchased. Any comments pertaining to a transaction in the statement can also be viewed.

[000102] The ratings are added to the screen on the date that they are rated, and hence a monthly objective will only be displayed on the screen when it has been rated and 30 points have been allocated to it. As the ratings are carried out on a daily basis, the archiving principle will dictate how many days data is viewed in the 'Statement' screen. i.e.: If the archive period is defined as "60" in the call center configuration, then 60 days data will be viewable in the reward manager statement screen.

[000103] The reward manager utility function 42 acts as an administration tool for all items ordered by employees. It allows the reward administrator to change the status of all

orders which is then communicated back to individuals via function 41. A sample screen is shown in Fig. 7(b).

[000104] The reward points editor function 43 allows a user to manually adjust the points (by adding or subtracting) of a specific user. The main purpose of this screen is to allow flexibility in the reward system. Typically this screen is used to allow the team leaders and managers to reward behavior which is not measured by the system. These team leaders and managers have discretion over how they manage the reward 15 system and the points so that the reward system is not seen as taking the discretion of responsibility away from people.

[000105] The team leaders and managers may also use this to reward people where there is no set objective against the action, (i.e. a customer phones in stating that they were pleased with the service they received from an agent).

[000106] It will be appreciated that the disclosure presents embodiments that provide for effective centralized performance measurement and reporting, while also greatly assisting with people management in a flexible manner. The illustrated system also provides for automated appraisal and reward administration. The ability of agents to view their own development data is very significant as it enhances team participation.

[000107] Other embodiments not expressly described, e.g., including variations in construction and detail, are contemplated by this disclosure, such as may be within the scope of the claims.

What is claimed is: